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### **REMARKS**

By way of the present communication applicants have amended claim 1 so that is clear that RDX and TNT are separately being removed and have amended claim 2 so that it is no longer dependent on itself. It is now dependent on claim 1. Applicants acknowledge the examiner's consideration of applicants' Information Disclosure Statement.

#### **Claim Rejection Under 35 USC § 112**

Claim 2 has been rejected under 35 U.S.C. 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter that applicant regards as the invention. This rejection was based on the fact that claim 2 was dependent on itself. Applicants have amended claim 2 so that it is not dependent on claim 1. Therefore applicants request that this rejection be withdrawn.

#### **Rejection Under 35 USC § 103**

Claims 1-16 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Spencer et al. (US 5,977,354).

#### **Examiner's Position**

The examiner restates applicants' invention as being drawn to a process for recovering 2,4,6-trinitrotoluene (TNT) and cyclo-1,3,5-trimethylene (RDX) from a blend of TNT and RDX, which comprises introducing a blend into a first vessel wherein TNT is separated from the RDX by use of a solvent that is effective for dissolving TNT but not RDX, the TNT in solvent is then passed to a separation stage wherein the solvent is recovered and recycled; the slurry of RDX and

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water from the first vessel being passed to a second vessel where the water is displaced with a desensitizing agent.

It is the examiner's position that Spencer et al. teach a method for recovering secondary explosive materials, particularly nitramines, from an explosive composition, containing a mixture of TNT and at least one secondary explosive such as RDX. The examiner continues by saying that Spencer et al teach a method comprising washing the blend with a solvent for TNT and a non-solvent for the secondary explosive. The examiner states that for RDX this non-solvent is toluene. The examiner mentions that the secondary explosive crystals are then washed and dried.

It is the examiner opinion that the difference between the instant claims and Spencer et al is that the instant process is further limited to the desensitizing agent, such as isopropyl alcohol, whereas Spencer et al is silent on the use of a desensitizing agent.

The examiner also argues that the separation of organic compounds based on suitable solvents is obvious in the art and that the removal of organic solvents by separation zones for displacing the compound to be extracted into a suitable solvent or water is a routine measure for the skilled artisan, especially when the compound has a negligible solubility in the organic solvent.

The examiner concludes by saying that it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the reference teachings, such as selecting the suitable solvent for the compound, to recover the TNT and RDX from the blend with a reasonable expectation of success. The examiner also states that the use of alternative solvents is common practice in the art. It is examiner's belief that some limitations of the instant dependent claims may be not expressly disclosed in Spencer et al, but that these limitations appear to be drawn to tweaking the process conditions, particularly recycling of the solvents and

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desensitizing agent. The examiner also believes that modifying such methodology is *prima facie* obvious because one of ordinary skill in the art would have been modified to use known purification methods to make the process more efficient or explore economical advantages over the other, since the examiner believes it is within the scope of optimize the conditions through routine experimentation.

### **Applicants' Position**

It is applicants' position that Spencer et al. fails to suggest the instantly claimed invention. As the Examiner states, Spencer et al. teaches the recovery of RDX and TNT from a blend of RDX and TNT. But the way Spencer et al. does this is to melt the TNT and let it drop through a perforated plate into a collection tank leaving behind the remaining material, including RDX particles. The RDX particles are contaminated with impurities, one of which is trace amounts of TNT. Spencer et al. then uses a material that is a solvent with respect to TNT and a non-solvent with respect to RDX to remove the trace amounts of TNT from the RDX particles. This is far different than the instantly claimed invention which uses on solvent extraction, without a melting step, to separate TNT from RDX. One question that comes to mind is: If Spencer et al is using a solvent to wash away trace amounts of TNT from RDX particles, why didn't they consider avoiding the melting step and just using the solvent to separate to entire amount of TNT from the mixture of TNT/RDX. The answer must be that they, having at least ordinary skill in the art, did not realize that they could separate such a large amount of TNT from RDX using solvent extraction alone. Thus, it is applicants' position that one having ordinary skill in the art reading Spencer et al. would only learn that trace amount of TNT could be cleaned from the surface of RDX particles using a solvent – *not that the entire amount of TNT could be separated with a solvent.*

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It is also applicants' position that the technology of using a solvent in Spencer et al. is different than the technology of using a solvent in the instantly claimed invention. That is, Spencer et al. is practicing a "cleaning" technique using a solvent to clean the surface of RDX particles of impurities. The instantly claimed invention uses "solvent extraction" to extract substantially the entire amount of TNT from the mixture of TNT and RDX. Any extraction practice by Spencer et al. relates to melting and physically separating one component from another. That is, melting the TNT and extracting it by letting it drop away from the mixture of TNT and RDX.

Therefore, it is applicants' position that Spencer et al. does not suggest the presently claimed invention. It is requested that the examiner reconsider and withdraw this rejection.

**Double Patenting Rejection**

Claims 1-16 are provisionally rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over the claims of U.S. Patent No. 6,777,586.

The examiner comments that although the conflicting claims are not identical, they are not patentably distinct from each other because: they generically overlap and that the difference between the instant claims is and those of the '586 patent is that the instant claims start with a blend of TNT and RDX, wherein as the '586 patent first recovers the TNT and RDX from explosive and non-explosive components.

Applicants submit herewith a Terminal Disclaimer, signed by applicants' attorney wherein any patent to issue from the instant application is enforceable up until the expiration date of U.S. Patent No. 6,777,586.